State or Territory.	Station.	For	1887.	Since establishment of station.				
		Max.	Min.	Max.	Year.	Min.	Year,	
41.		0	0	0	_	0		
Alabama	Mobile	76.8	36.2	85.0 86.3	1879 1882	29.0	188 187 187	
Arizona	Montgomery	79.9	32.4	90.0	1879	25.0 - 8.0	1873	
	Prescott	78.9	23.1	83.0	1879	11.0	188	
Arkansas	Fort Smith	76.0	28.0	82.8	1879 1884	23.5	1884	
	Little Rock	74.9	30.0	83.0	1882	23.0	1886	
- willOrnia	San Francisco	78.0 82.2	45.0	77.0	1879 1879	39.0	1880	
Do Colorado	San Diego Denver	74.7	43.5 13.2	99.0	1879	-10.7	1886	
110	Pike's Peak	31.3	- 4.9	43.0 69.0	1879 1880	-29.0	187	
ounecticut	New Haven	51.4	11.5	69.0		- 0.2	187 188 188	
Dakota	New London	53.3	15.2	64.0	1878 1879, 1882	4.0	1880	
	Fort Buford Yankton	59.0	9.8	70.0	1879	-23.0 -16.0	TR76 TRR	
	Washington City	77.5 65.0	20.8	79.0 88.0	1879 1880	4.0	1873, 1876 1873, 1886	
· IOTIGA	Jackson ville	80.0	35.7 58.4	88.0	1882	31.0	1873, 1876	
Do Jeorgia	Key West	81.6	58.4	89.0	1873, 1874 1882	53.0	1873, 1880	
	Atlanta Savannah	73·5 81.2	25.2	87.0	1882	27.0	187	
uaho	Boisé City	73.6	32.5 23.8	76.0	1881	9.0		
	Cairo Chicago Indianapolis	74.6 68.0	24.2	84.0	1879	10.0	1873	
Do	Chicago		9.3 15.8	73.0	1875	-12.0	187 188	
Indiana Indian Territory Iowa	Fort Sill	69.6 86.0	26.0	77.0 95.0	1875 1879	10.0	188	
	Dubuque	70.5		75.0	1875 1880	10.0	187	
Do	Des Moines	72.4 80.1	9.8	75.0 80.0	1880	- 5.6 - 8.0	1882	
Do	Dodge City Leavenworth	80.1	10.6	89.0	1879	- 8.0	1886	
Do Kentucky Louisiana	Leavenworth	83.6	20.5	84.0	1879	2.0	187	
Louisiana	Louisville New Orleans	79.3 80.8	43.8	79.0	1879	3.0 36.0	187 188	
Do	Shreveport	83.8	34.6	90.0	1882	26.0	1870	
	Eastport	45.0 46.4	2.0	53.0	1878	7.9	1880	
Do Maryland Massachusetts	Portland Baltimore	56.6	21.4	76.0	1874 1880	- 7.0 5.0	187	
dassachusetts.	Boston	52.9	9.8	72.0	1880	- 7.5	187	
BWII	Marquotto	46.1	-14.2	70.0	1878	-16.0	1884	
	Grand Haven	59.8	7.4	71.0	1878 1881	- 4.9	188 188	
Innesota	Saint Vincent Saint Paul	45.0	-27.0 - 7.1	49.0	1879	-31.0 -22.5	187	
Do Mississippi Missouri Montano	Vicksburg	\$3.6 80.1	36.9	85.0	1880	27.0	187 188	
lissouri	Saint Louis	79.1	22.9	82.0	1879 1885	27.0 8.0	1873, 1876	
	Fort Assinationne	60.2	-14.7	68.2	1885	-25.8	1884	
Do	Helena	67.4 78.0	4.2	86.0	1881 1879	-10.0 -21.0	1880	
Yebraska Do	North Platte	78.1	10.0	82.0	1879	7.0	1880	
Nevada	Winnemucca	74.7	17.7	82.0	1879	- 3.0	1882	
New Hampshire	Mount Washington	32.3	-25.9 18.4	47.0	1876	-49.0 8.0	1872	
New Mont	Atlantic City	56.2 67.0	18.4	72.0 82.0	1880 1879		1880	
New York	Santa FéBuffalo	51.0	19.5 11.4	72.0	1875	0.0 — 4.1	1884	
North Carolina	New York City	49.6	16.3	72.0	1875 1879 1879, 1880 1878	3.0	1872 1884	
Carolina	Charlotte	79.7 81.9	16.3 26.8	79.0	1879, 1880	23.0		
Do	Wilmington		27.7 18.6			20.0	1873	
Do	Cincinnati	73.0 62.0	10.9	77.0 76.0	1875 1886	T.0	187 188	
	Sandusky Portland		31.2	79.0	1886	25.5	1880	
Do	Roseburg	75.2 81.0	28.6	79.0 80.0	1881, 1883	19.0	1880	
ennsylvania	Pitteburg	68.5	14.9	80.0	1876	2.0	1877 1872	
Shode Island	Philadelphia Block Island	53.3	17.2	75.0 56.0	1880 1886	5.0	1886	
Do	Charleston	53.7	33.9	85.0	1882	5.8 28.0	1876	
	Knoxville	75.6	21.6	13.0	1882	6,0	1873 1876	
Do	Memphis	75.6 76.8 84.8	30.2	85.0	1879	18.0	1876 1880	
Do	Brownsville	84.8	46.9	92.3 86.0	1884 1880	35.0	1880	
Jtah "	Fort Elliott Salt Lake City	82.8	24.0 27.5	77.0	1870	4.0	1874	
	Lynchburg	73·9 80.6	23.5	79.0	1879	4.0 16.0	1884	
Do	Norfolk	75.8	25.1	79.0	1880	16.0	1872 1882	
Vashington Ter	Spokane Falls	65.7	15.2	74.0	1881	7.0		
Do Visconsin	Olympia	63.2	25.2	71.0	1881	23.I	1880	
Do	La Crosse	65.9 56.8	- 1.0 - 4.2	72.0	1875 1878	-23.0 - 8.5	1873 1884	
	TELL MOUNTO	20.0	4.4	,5.0	10,0	9.5		

tables and fruit, especially in the upper counties, while the freeze on the 29th and 80th was very disastrous throughout the state; much of the fruit which survived the first-mentioned frost succumbing to the latter. All the early varieties of peaches were killed. Plums and cherries suffered severely. Strawberries were set back about two weeks. In some instances potatoes were injured where set back about two weeks. jured, while beans, cucumbers, and squashes were killed.

Frosts occurred in the various districts as follows:

New England.—1st to 31st.

Middle Atlantic states.—1st to 31st.
South Atlantic states.—1st, 2d, 3d, 10th to 20th, 22d, 23d, 24th, 26th, 29th, 30th, 31st.

18th, 19th, 20th, 23d, 24th, 25th, 30th; Sanford, 1st, 18th, 19th; Duke, 1st, 19th 20th, 24th, 30th; Manatee, 1st, 29th; Alva, 15th, 17th, 18th.

East Gulf states.—15th, 18th to 20th, 22d, 23d, 29th, 30th.

West Gulf states.—10th, 11th, 14th, 17th, 18th, 21st to 25th, 28th, 29th, 30th.

Tennessee.—11th to 15th, 18th to 20th, 23d, 25th, 28th to 31st. Ohio Valley.—1st to 6th, 8th to 31st.

Lake region.—1st to 31st.

Extreme northwest.—2d to 10th, 12th to 31st.

Upper Mississippi and Missouri valleys.—1st to 31st.

Northern slope.—1st to 31st.

Middle slope.—1st to 12th, 15th to 23d, 25th to 28th, 30th, 31st. Southern slope.—1st to 6th, 8th to 11th, 13th, 14th, 16th, 17th, 20th to 25th, 27th, 28th, 29th, 31st.

Southern plateau.—1st 2d, 3d, 5th to 13th, 15th to 18th, 20th to 25th, 28th to 31st.

Middle plateau.—1st to 23d, 25th to 31st.

Northern plateau.—1st, 3d, 4th, 5th, 8th to 13th, 16th, 18th to 23d, 25th to 30th.

North Pacific coast region.—1st to 4th, 10th, 12th, 17th to 22d, 26th, 27th, 29th, 30th.

Middle Pacific coast region.—1st, 5th, 6th, 8th, 18th to 21st.

Ice formed in the southern parts of the country as follows: Arkansas.—Lead Hill, 22d, 23d, 28th, 29th; Little Rock, 29th. Georgia.—Savannah, 28th, 31st.

Louisiana.—Liberty Hill, 22d, 23d.
South Carolina.—Spartanburg and Stateburg, 15th, 18th, 19th, 20th, 29th, 30th; Charleston, 18th, 29th. Texas.—Corsicana, 23d, 28th, Palestine, 28th.

## TEMPERATURE OF WATER.

The following table shows the maximum and minimum temperature of the water at the several stations; the monthly ranges of water temperature; the mean water temperature; the average depth at which the observations were made; and the mean temperature of the air:

Temperature of water for March, 1887.

				<u> </u>		
Station.		erature ttom.	Range.	Mean water tempera- ture.	Mean tempera- ture of the air at station.	Average depth, feet and tenths.
	Max.	Min.				
Almana Milaki a	۰			. 0	۰	
Alpena, Mich a		37.8	3.7	39.4	37.8	11.6
Boston, Mass		31.0	6.6	34.5	31.6	22.9
Buffalo, N. Y.a		3		34.5		
Cedar Keys, Fla		57.3	5.1	64.6	61.3	8.3
Charleston, S. C.b		54.3	4.6	56.6	54.8	36,ŏ
Chincoteague, Va	51.4	37.4	14.0	42.7	40.3	3.3
Cleveland, Ohio a						•••••
Detroit, Mich. a						***************************************
Duluth, Minn. a						
Eastport, Me	36.0	34.0	2,0	35.1	28.5	14.I
Escanaba, Mich. a		***********		•••••••		
Grand Haven, Mich		32.1	4.0	33.7	27.3	17.8 18.0
Jacksonville, Fla		56.1	13.8	63.4	59.5	18.9
Key West, Fla	78.3	69.0	9.3	74.3	70.7	16.2
Mobile, Ala	57.0	52.3	4.7	54.6	58.9 34.0	11.5
New London, Conn		33.8	5.1	36.3	34.3	14.9
New York City		33.I 44.2	5.1	35.7 46.1	44.1	15.7
Norfolk, Va Pensacola, Fla		58.3	10.1	64.4	60.2	18.0
Portland, Me		30.0	7.1	33.9	28.8	17.0
Portland, Oregon		40.6	7.6	45.6	49.4	57.4
Sandusky, Ohio c		33.0	5.0	35.1	31.6	11.5
Savannah, Ga		53.3	6.1	56.4	56.5	10.3
Toledo, Ohio d		33.2	9.3	38.2	31.8	15.8
***************************************	1,2.0	<sub>ا</sub>	1			_

Florida.—Cedar Keys and Limona, 1st; Archer, 1st, 2d, 15th, a Frozen throughout the month. b Record for 26 days. c Record for 20 dinterrupted by ice. d Record for 29 days; observations interrupted by ice. c Record for 20 days; observations

## PRECIPITATION (expressed in inches and hundredths).

The distribution of precipitation over the United States and | table of miscellaneous meteorological data are given, for each Canada for March, 1887, as determined from the reports of Signal Service station, the total precipitation, with the deabout six hundred stations, is exhibited on chart iii. In the partures from the normal. The figures above the several geo-